

WHAT IS CLAIMED IS:

1. An error correction apparatus comprising:  
a receiving section configured to receive a  
signal;

5 an amplifier section configured to amplify the  
received signal received by the receiving section;

an automatic gain control section configured to  
generate a control signal and to control a gain of the  
amplifier section based on the generated control signal,  
10 so as to maintain the amplified received signal at a  
predetermined level; and

a turbo decoder configured to execute an error  
correction process on the received signal to thereby  
output a decoding result of the executed received  
15 signal based on the generated control signal.

2. The error correction apparatus according to  
claim 1, the turbo decoder including a decoding section  
and a multiplication section coupled to the decoding  
section, configured to multiply the received signal by  
20 the generated control signal, so that the received  
signal has a reverse property of the generated control  
signal before the received signal is supplied to the  
decoding section of the turbo decoder.

3. The error correction apparatus according to  
25 claim 1, wherein the turbo decoder including a  
calculating section configured to calculate a path  
metric of the received signal, and an outputting

section configured to output a decoding result of the received signal based on the calculated path metric, and a plurality of lookup tables related to a weighting process executed when calculating the path metric, the  
5      lookup tables being switched in accordance with the generated control signal to thereby change a weight used to calculate the path metric.

4. The error correction apparatus according to claim 1, further comprising a reception power  
10      calculating section configured to calculate a reception power of the received signal, and an SIR estimating section configured to estimate a signal-to-interference ratio (SIR) of the received signal on the basis of the calculated reception power and by the generated control  
15      signal, the turbo decoder outputting a decoding result of the received signal, on the basis of the estimated SIR.

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